

Jefferson Lab Weekly Briefs

September 5, 2007

12 GeV Upgrade

The Architect-Engineering (A-E) firm, HSMM, continues with its design effort on the Hall D Complex (civil) and plans to submit the 100 percent design document to JLab in October. In conjunction with this design effort, the construction management firm, Alpha, is developing a detailed construction schedule for the Hall D Complex. This schedule will detail the scope and interfaces for three construction phases and establish a constructible logic for the civil construction contract. Upon completion of the schedule, HSMM will document these three phases on the design drawings to establish the schedule requirements for the construction contractor. On Aug. 30, the 12 GeV Civil project team met with Alpha for a preliminary review of the construction schedule and identified the funding and operational constraints that need to be included in the schedule.

Also in August, Jefferson Lab Facilities Management personnel started the 100 percent design effort on the 12 GeV Upgrade North and South (N&S) Access Building Addition and the Beam Switchyard (BSY) Addition.

Physics

The maintenance and repair on CLAS has been completed, and CLAS has been returned to its operating position. The upgrade of the Time-of-Flight system is more than 50 percent complete. The Forward DC test is in preparation and should commence next week. Installation of the Frozen Spin Target (FROST) has been delayed due to continuing problems with getting the polarization to acceptable levels.

JLab's Safety Numbers (Sept. 5, 2007)

305 Days since Last Recordable Accident (JLab Record: 305) Congratulations, everyone!
305 Days since Last Lost Workday Accident (JLab record: 455)

Environment, Safety, Health & Quality

Many of us have become aware recently of the impacts of both domestic and imported counterfeit products. Product counterfeiting is big business. The overall costs of product counterfeiting are estimated to be as much as 5-7 percent of total world trade. That's roughly \$500 billion dollars annually. Counterfeiters will copy and sell anything that turns a profit, without regard to consumer safety and the law. The costs of counterfeiting are shared by all of us - consumers, manufacturers, retailers, communities and entire economies.

Underwriters Laboratories (UL) has taken an aggressive stance against counterfeiting through a comprehensive program that works closely with U.S. Customs and Border Protection personnel to provide them with the information necessary to distinguish between authentic and counterfeit UL Marks. [UL provides information](#) to assist consumers in identifying counterfeit products on its Web site.

- FermiLab Electrical "Near Miss" - An August FermiLab electrical event shows the importance of proper personal protective equipment (PPE) use by electrical workers. Two Fermilab electricians in an insulated bucket truck were removing high-voltage, cut-out fuse links with an insulated hot stick when an electrical arc occurred. The arc ionized, causing a phase-to-phase plasma with the next energized adjacent phase, resulting in a flashover. The event also caused an overcurrent in the main feed transformer, blowing its primary fuses and taking down power to a large part of Fermilab. The workers were wearing appropriate PPE, and there were no injuries. There were no burn or flash-marks on the PPE as a result of this incident.

Accelerator

Laser alignment of all three lasers was started, as well as the activation of Gun 2 and the quantum efficiency measurement of the wafer.

Troubleshooting of Marc1 box supply started. Preparation work on NL04 continued with wave guide installation and upstairs power supply work and recovery. Commissioning of NL04 began. The installation of the rebuilt cryomodels C50-3 at SL04 and C50-2 at SL16 went well. End Station Refrigerator upgrade and rework continued with the announcement that the ESR scheduled down has been extended to Oct. 1, due to Dominion Virginia Power maintenance on the 40 MVA (megavolt-ampere) substation. A new cable, a circuit board in the fire alarm control panel and a duct smoke detector were replaced as a result of lightning damage to the fire protection system. Many individual actions of radiofrequency (RF) and magnet systems maintenance and repair continued.

Free-Electron Laser (FEL)

The gun test stand gun solenoid measurement was completed this week and meets specs. The new gun chamber has been moved to the GTS enclosure and placed inside the clean room area. The new Laser Personnel Safety System is now complete for lab 3A, meaning that labs 1,2, 3A, and 6 are now ready for certification and/or operation.

Theory Center

At moderately low momentum transfer ($-t$ up to 1 GeV^2), the coupling to the vector meson production channels gives the dominant contribution to real Compton and deeply virtual Compton scattering (DVCS). In a recent Theory Center paper, arXiv:0708.1250v1 [hep-ph], the Regge Pole approach was used to evaluate the (unexpectedly large) unpolarized DVCS cross section recently measured at JLab, without explicit need of Generalized Parton Distributions. The paper also addresses the issue of the relationship between the Regge and GPD approaches.

Announcements

• Communicators Now Under One Roof

The Lab's photographer, illustrator and their student worker have joined Public Affairs. A web editor position, to replace the unfilled web

developer position, has also been moved to Public Affairs, placing the Lab's communication functions -- writing, editing, photography, multimedia, graphic design and web content -- all in the same office. Web infrastructure and technical requirements related to the web will continue to be handled by the IT Division. To take advantage of the Lab's illustration, graphic design/illustration, photography and web services, continue using the Computer Center Problem Reporting system to submit your requests (select EM-general category). Web page content updates also may be input through the CCPR system (select EM-Web category). In addition, requests for distributing information Lab-wide should be sent to jlabinfo@jlab.org.

• The Energy Employees Occupational Illness Compensation Program Act (EEOICPA)

The EEOICPA provides compensation for certain DOE employees and contractor or subcontractor employees who became ill or were injured because of their work. A memo from the Department of Labor with more information is available on the [JLab Web site](#).

• American Red Cross Blood Drive

The next blood drive is scheduled for Thursday, Sept. 6, 10 a.m. - 4 p.m. in CEBAF Center room F113. To schedule an appointment or to volunteer, contact Johnnie Banks at x7539 or jbanks@jlab.org.

JLab Calendar of Events

[Sept. 6: American Red Cross Blood Drive](#)

Sept. 7: United Way Day of Caring

Sept. 10-14: 12 GeV Upgrade: OECM EIR Review

[Sept. 13: JSA's Electronic Commerce Small Business Vendor Show](#)